Grade Level:	**6th, 7th or 8th**
Class Title:	**Pre-Algebra**
Subject:	**Math**
Class Description:	This course will introduce students to several topics that will form a foundation for their high school math courses. The three main areas of study in pre-algebra focus are as follows: 1) formulating and reasoning about expressions and equations, including modeling an association in two variables with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem. This is a full-year middle school course. This class will cover one or more of the Washington State K-12 Learning Standards for Mathematics. This will be a year-long class, spanning the 2022-2023 school year. The estimated instructional hours for this class are _____per week. State Cedars Code: 02053 This remote class is overseen by Julie Rheinschmidt.
Learning Materials:	List all materials
Learning Goals/ Performance Objectives:	**CCS (Pre-Algebra) CCS – common core standards** **Know that there are numbers that are not rational, and approximate them by rational numbers.** 1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. **Work with radicals and integer exponents.** 1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, 32 × 3–5 = 3–3 = 1/33 = 1/27* **Understand the connections between proportional relationships, lines, and linear equations.** 1. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.* **Analyze and solve linear equations and pairs of simultaneous linear equations.** 1. Solve linear equations in one variable. **Define, evaluate, and compare functions.** 1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. **Use functions to model relationships between quantities.** 1. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values. **Use functions to model relationships between quantities.** 1. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a

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Understand congruence and similarity using physical models, transparencies, or geometry software.
1. Verify experimentally the properties of rotations, reflections, and translations:

Understand and apply the Pythagorean Theorem.
1. Explain a proof of the Pythagorean Theorem and its converse.

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.
1. Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

Investigate patterns of association in bivariate data.
1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

A team of certificated teachers who are highly qualified in this subject matter has reviewed this WSLP. This is just a sample of learning goals. Other learning goals are available to view by going to OSPI's website.
https://www.k12.wa.us/student-success/learning-standards-instructional-materials

Learning Activities:	The student will complete 4 lessons a week. The student will practice math facts 10 minutes each day. The student will complete one written assessment each day.
Progress Criteria/ Methods of Evaluation:	The student will keep a portfolio of weekly work samples and any written assessments to present to consultant at face-to-face meetings each month. Monthly assessments will be completed by the consultant/certified teacher. Monthly Progress will be marked satisfactory or unsatisfactory based on the professional judgment of the certified teacher using parent input, work samples, and monthly assessments. The listed activities will be reviewed each month between the certified teacher/consultant, parent and student. Student's work will be determined satisfactory when the student shows consultant evidence of at least one graded activity each month and one graded extension every three months. Each month the consultant/teacher will use his/her professional judgment to determine if the student will master the objectives by the end of the course.